

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 9029 2/6/2001]

[Docket No. 2000-NE-51-AD; Amendment 39-12103; AD 2001-03-02]

RIN 2120-AA64

Airworthiness Directives; Pratt & Whitney Canada Models PW306A and PW306B Turbofan Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule, request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to Pratt & Whitney Canada (PWC) models PW306A and PW306B turbofan engines. This amendment requires removing compressor rotor 2nd, 3rd, and 4th stage drum assemblies and impellers from service before exceeding new, lower cyclic life limits. This amendment is prompted by the results of test analyses that indicate certain compressor rotor 2nd, 3rd, and 4th stage drum assemblies and impellers do not have full published life. The actions specified in this AD are intended to prevent premature cracking of compressor rotor 2nd, 3rd, and 4th stage drum assemblies and impellers which could result in an uncontained engine failure and damage to the airplane.

DATES: Effective February 21, 2001. Comments for inclusion in the rules docket must be received on or before April 9, 2001.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2000-NE-51-AD, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may also be sent via the Internet using the following address: "9-ane-adcomment@faa.gov". Comments sent via the Internet must contain the docket number in the subject line. This information may be examined at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

FOR FURTHER INFORMATION CONTACT: James Rosa, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone: 781 238-7152; fax: 781 238-7199.

SUPPLEMENTARY INFORMATION: Transport Canada (TC), which is the airworthiness authority for Canada, recently notified the FAA that an unsafe condition may exist on PWC models PW306A and PW306B turbofan engines. PWC conducted testing and found indications of crack initiations that occurred earlier than expected. As a result of this testing, the manufacturer advises that there is a possibility of premature failure of compressor rotor 2nd, 3rd, and 4th stage drum assemblies part numbers (P/N's) 30B4149-01, 30B4539-01, and 30B4725-01, and impellers P/N's 30B4183-01, 30B4494-01, and 30B4564-01. TC has issued Airworthiness Directive No. CF-2000-27, dated August 29, 2000, in order to ensure the continued airworthiness of these engines in Canada.

Bilateral Airworthiness Agreement

This engine model is manufactured in Canada and is type certificated for operation in the United States under the provisions of Section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Pursuant to this bilateral airworthiness agreement, TC has kept the FAA informed of the situation described above. The FAA has examined the findings of the manufacturer, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

Required Actions

Since an unsafe condition has been identified that is likely to exist or develop on other products of this same type design that are used on airplanes registered in the United States, this AD is being issued to prevent premature cracking of compressor rotor 2nd, 3rd, and 4th stage drums and impellers. This AD requires a decrease in the current life limit of compressor rotor 2nd, 3rd, and 4th stage drum assemblies and impellers from 6,000 to 3,000 cycles, and replacement of the drums and impellers with serviceable parts. The new life limits are based on the manufacturer's test results that indicate that compressor rotor 2nd, 3rd, and 4th stage drum assemblies and impellers do not have full published lives.

Immediate Adoption

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted to the address specified under the caption "ADDRESSES." All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2000-NE-51-AD." The postcard will be date stamped and returned to the commenter.

Regulatory Impact

This action does not have federalism implications, as defined in Executive Order 13132, because it would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power responsibilities among the various levels of government. Accordingly, the FAA has not consulted with state authorities prior to publication of this proposal.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency

regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "av-info.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2001- 03-02 Pratt & Whitney Canada: Amendment 39-12103 Docket No. 2000-NE-51-AD.

Applicability:

Pratt & Whitney Canada (PWC) models PW306A and PW306B turbofan engines with compressor rotor 2nd, 3rd, and 4th stage drum assembly part numbers (P/N's) 30B4149-01, 30B4539-01, and 30B4725-01, and impellers P/N's 30B4183-01, 30B4494-01, and 30B4564-01 installed. These engines are installed on but not limited to Dornier Luftfahrt GmbH 328-300 Jet, and Israel Aircraft Industries, LTD. Galaxy airplanes.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance

Compliance with this AD is required as indicated, unless already done.

To prevent premature cracking of compressor rotor 2nd, 3rd, and 4th stage drum assemblies and impellers which could result in an uncontained engine failure and damage to the airplane, accomplish the following:

Compressor Rotor 2nd, 3rd, and 4th Stage Drum Assembly, and Impeller New Life Limit

(a) Remove compressor rotor 2nd, 3rd, and 4th stage drum assembly P/N's 30B4149-01, 30B4539-01, or 30B4725-01, and impeller P/N's 30B4183-01, 30B4494-01, or 30B4564-01 before exceeding their new life limits in Table 1, and replace with serviceable parts.

Table 1. New Life Limits.

Engine Model	Part Name	Part Numbers	Flight Count Factor	Life Limit in Cycles
PW306A	Compressor Rotor 2 nd , 3 rd , and 4 th Stage Drum Assembly	30B4149-01	0.9	3,000
		30B4539-01	0.9	3,000
		30B4725-01	0.9	3,000

Engine Model	Part Name	Part Numbers	Flight Count Factor	Life Limit in Cycles
PW306B	Impeller	30B4183-01	0.9	3,000
		30B4494-01	0.9	3,000
		30B4564-01	0.9	3,000
	Compressor Rotor 2 nd , 3 rd , and 4 th Stage Drum Assembly	30B4149-01	1.0	3,000
		30B4539-01	1.0	3,000
		30B4725-01	1.0	3,000
	Impeller	30B4183-01	1.0	3,000
		30B4494-01	1.0	3,000
		30B4564-01	1.0	3,000

Use of Flight Count Factor

(b) For PW306A engines only, multiply number of flights (takeoffs and landings) by 0.9 to determine cycles.

Examples: 3,333 (flights) x 0.9 (flight count factor) = 3,000 cycles.

2,850 (flights) x 0.9 (flight count factor) = 2,565 cycles.

(c) Except as provided for in paragraph (d) of this AD, do not install any part identified by P/N in paragraph (a) of this AD, that exceed the new life limit.

Alternative Method of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators shall submit their request through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, ECO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the ECO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Effective Date of this AD

(f) This amendment becomes effective on February 21, 2001.

FOR FURTHER INFORMATION CONTACT: James Rosa, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone: 781 238-7152; fax: 781 238-7199.

Issued in Burlington, MA, on January 30, 2001

David A. Downey, Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.